

Farmer achieved maximum profit from cultivation of CSV 20 Rajasthan-Udaipur

Most of the farmers grow sorghum in poor, marginal and sub-marginal land by broadcast method for fodder using very high seed rate in Fatehnagar (Mavali) of Udaipur district. Shri Banshi Lal Jat of Changedi village, Udaipur district, was an educated and progressive farmer in the locality. He adopted the sorghum production technology advocated by Sorghum Project, Maharana Pratap University of Agricultural Technology, Udaipur during *Kharif* season on 0.4 ha with CSV 20 (SPV 1616). The soil of the frontline demonstration field was sandy loam with medium fertility. The total rainfall was more than average (about 841mm) which was well distributed through out the crop season and crop was free from most of the insect pests. The spacing was maintained at distance of 45 cm line to line and 10-12 cm within rows, 25 days after sowing (DAS). The farmer used *Bukkher* (local made harrow) to carry out intercultivation and eradicate the weeds from the field.

The furrows within two rows were made by using deshi plough. The farmer followed all recommended doses of fertilizers i.e 80 kg/ha N+40 kg/ha P₂O₅. Out of these fertilizers, half dose of N and full dose of P₂O₅ was applied in furrows below the seed at the time of sowing with the help of *Pora* and remaining half dose of nitrogen was broadcasted in standing crop at 30 DAS.



Experts examining sorghum plot at tillering stage



CSV 20 at grain filling stage and farmers

After 25 days of sowing, ridging was done in half demonstrated field and half was left without ridging. Ridging was done with the help of same implement *Desi plough* without any extra expenditure. In the ridges moisture could be conserved for a longer period. Simultaneously, nearly half portion of the field was sown with their own practice.

The crop growth of CSV 20 was very good and it had not lodged till end due to prop roots developed in lower nodes of the plants. He also realized grain as well as dry fodder yield higher than his expectation, which was new to all villagers. Under this system (ridging) root development was also better which prevented lodging, insect-pests was less and crop management was easy, and moisture availability was increased by 10-12% by ridging.

Cost of cultivation

Sl. No	Particular	Unit cost (Rs)	Total cost IP (Rs)	Total cost FP (Rs)
1	Land preparation(8 hrs.) One deep ploughing + one cross harrowing	170 /hr	1360	1360
2	Sowing (4hr)	170 /hr	680	680
3	Seed : Improved – 10 kg /ha Local – 100 kg /ha	18 /kg 10 /kg	180	1000
4	Fertilizer : Nitrogen Phosphorus	10.96 /kg N 16.85 /kg P ₂ O ₅	876 674 =1550	Only applied urea in standing crop @ 75 kg /ha Cost-Rs 378
5	Weeding & interculture operations by <i>Bukkher/desi plough</i>	200/day	400	400
6	Plant protection	-	-	-
7	Bird watching (15men days)	70/day	1050	-
8	Harvesting, Threshing and winnowing (17 for IP & 15 for LP men days)	70/day	1190	1050
9	Miscellaneous		100	100
	Total cost		6510	4968
	Yield (q/ha)			
	Grain (IP:2100kg and LP:450 kg /ha)	450 /100 kg	9450	2025
	Fodder(IP 10.4 t/ha and LP 10 t/ha)	125 /100 kg	13000	12500
	Total Income		22450	14525
	Net profit (Rs. /ha)		15940	9557
	B:C ratio		2.45	1.92

IP= Improved practice, FP=Farmer's practice

Impact of the demonstrated technologies

The farmer was highly impressed with the performance of variety CSV 20 in terms of grain and fodder production. The leaves of the plant remain green till end. There were no disease observed on leaves and stems. The fodder of this variety was sweet with good quality digestible fiber. Animals ate the plants along with nodes. The number of leaves was more than the local variety. He got more than 400 kg /bigha (2100 kg /ha) grain and 2100 kg /bigha (10.4 t /ha) dry fodder in the demonstrated plot where they obtained 1500 kg /ha higher grain yield than the local variety. Sorghum field day was organized by the centre in October, 2006 on the field which was attended by many farmers (around 80) of the village and other adjoining area. They observed the varietal performance in the field and appreciated. They asked the seeds for sowing in their fields during coming season. The variety was very popular in that area till date.